Financial Statement Analysis 1

Purpose and Learning Objectives – This is an introductory course in financial (accounting) statements and their analysis. It reviews the basic financial statements, quality issues in using these statements, and the analysis of these statements for the purposes of making credit decisions.

Text – The NACM's custom 11th Edition of Lyn M. Fraser and Aileen Ormiston, *Understanding Financial Statements*, Pearson Learning Solutions.

Format – This is an on-line self-paced course. You will study the text and view the lectures, which are composed of PowerPoint slides and an audio track. The lectures explain and expand on the material in the text and explain its relevance to trade credit-granting decisions. They also review the problem assignments and present answers to these. Lectures are by Dr. Frederick C. Scherr, Professor of Finance (Emeritus), West Virginia University.

The course is composed of six modules. ***For each module, you should first read the reading assignment, do the assigned problem set, then view the lecture.*** Each lecture ends with a quiz. Questions may be taken from the assigned reading, the lecture, or the problem assignment for that module and are multiple choice or true/false. There are 10 questions on each quiz and you must get 7 correct to pass the quiz. You will have an opportunity to take a second quiz if you do not pass the first one. You must pass all six quizzes in order to pass the course.

The reading and problem assignments are:

Module	Chapter to Read	Lecture to View	Problem Assignment	Do you need a Calculator for the Test?
1	1	1	None	No
2	2	2	Problems from Ch. 2	Yes
3	3	3	Problems from Ch. 3	Yes
4	Appendix 3A	3A	None	No
5	4	4	Problems from Ch. 4	Yes
6	5	5	Problems from Ch. 5	Yes

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Problem Sets:

For chapter 2:

Problems 2.11, 2.14, 2.18, and 2.19.

- For problem 2.14, please use the following information
    - Beginning inventory 600 units at $10.
    - Purchases (in order from first to last)
        - 1000 units at $11
        - 900 units at $12
        - 700 units at $14
        - Sales for the period were 1900 units
- For problem 2.18, assume that there are no other transactions that would affect retained earnings except for income and dividends.
- For problem 2.19, assume that bonds payable is long term; that notes payable is short term; and that land held for sale is an "other asset". For this problem, also compute: (a) total current assets; (b) total current liabilities; (c) total shareholders' equity; and (d) the current ratio, computed as total current assets divided by total current liabilities.

For chapter 3:

Problem 3.12.

- In this problem, note that the entries below net sales are in random order and that you have to put them in the correct order. Assume that "equity losses" and "gain on sale of equipment" fall under "other income or expense". Incorporate the following subtotals:
    - gross profit (gross margin)
    - EBITDA
    - operating profit (EBIT)
    - pretax income (EBT)
    - net income (net earnings)
        - (Net income is also known as earnings after taxes, or EAT.)
- Also assume that the firm pays $100,000 in cash dividends and that there are no other transactions affecting the equity accounts; compute changes in retained earnings.

For chapter 4:

Dragoon Enterprises (problem 4.9) and Gerber Scientific (below).

- For Dragoon Enterprises, cash dividends are $200. Notes on this problem: (1) be sure to treat the change in interest payable as an item affecting operating cash flow; and (2) the firm issued stock with proceeds of $400 during the year.
- For Gerber Scientific, do question 1, using the info below:

Case 4.3 Gerber Scientific Inc.

According to Gerber Scientific Inc.'s (Gerber) Form 10-K, the firm develops, manufactures, distributes, and services automated equipment and software in three industries worldwide. Of its total revenue of $458.4 million for fiscal 2010, Gerber generated $257.2 million in sales of printing equipment, software, and related supplies to customers in the sign making and specialty graphics industry; $155.1 million in sales of sophisticated design and cutting equipment and software to customers in the apparel and industrial markets; and $46.1 million in sales of processing equipment, software, and related supplies to customers in the ophthalmic lens processing industry. Gerber's statements of cash flows follow:

GERBER SCIENTIFIC, INC.
Consolidated Statements of Cash Flows

	For the Fiscal Years Ended April 30,		
In thousands of dollars	2010	2009	2008
Cash flows from operating activities:			
Net (loss) income	$ (1,458)	$ 2,236	$ 14,504
Adjustments to reconcile net (loss) income to cash provided by operating activities:			
Depreciation and amortization	9,452	9,991	9,518
Deferred income taxes	(3,210)	(5,953)	2,501
Other-than-temporary impairment charge	—	2,290	—
Stock-based compensation	3,787	3,241	1,805
Loss (gain) on sale of assets	2,464	(622)	(2,287)
Other noncash items	2,177	2,220	2,191
Changes in operating accounts, excluding effects of acquisitions:			
Accounts receivable	5,126	25,795	(5,719)
Inventories	5,996	5,820	(6,220)
Prepaid expenses and other assets	71	79	696
Accounts payable and other accrued liabilities	706	(27,424)	(7,095)
Accrued compensation and benefits	(15)	(7,899)	311
Net cash provided by operating activities	25,096	9,774	10,205
Cash flows from investing activities:			
Capital expenditures	(4,489)	(8,187)	(8,589)
Proceeds from sale of available for sale investments	464	705	751
Purchases of available for sale investments	(308)	(457)	(753)
Proceeds from sale of net assets	13,709	2,622	345
Business acquisitions	(3,473)	(34,273)	(4,650)
Investments in intangible assets	(1,368)	(828)	(868)
Net cash provided by (used for) investing activities	4,535	(40,418)	(13,764)

Cash flows from financing activities:			
Debt repayments	(117,176)	(80,271)	(314,256)
Debt proceeds	89,525	110,686	321,862
Debt issuance costs	(494)	(1,174)	(993)
Common stock activities	(486)	898	1,373
Other financing activities	(341)	—	—
Net cash (used for) provided by financing activities	(28,972)	30,139	7,986
Effect of exchange rate changes on cash	333	(3,074)	1,413
Increase (decrease) in cash and cash equivalents	992	(3,579)	5,840
Cash and cash equivalents at beginning of year	10,313	13,892	8,052
Cash and cash equivalents at end of year	$ 11,305	$ 10,313	$ 13,892
Supplemental Schedule of Cash Flow Information			
Cash paid during the year for:			
Interest	$ 3,475	$ 2,856	$ 3,655
Income taxes, net of refunds	$ 4,517	$ 4,456	$ 5,290

The accompanying notes are an integral part of these consolidated financial statements.

Required:

1. Using the Consolidated Statements of Cash Flows for Gerber, prepare a summary analysis for the years ended April 30, 2010, 2009, and 2008.
2. Write an analysis and interpretation of the cash flows for Gerber for all three years. Be sure to analyze the cash flows from operating activities, as well as the overall cash inflows and outflows for the firm.
3. Evaluate the creditworthiness of Gerber based on only the cash flow statements.
4. What information from the balance sheet would be useful to a creditor in determining whether to loan Gerber money?

- then the following:

  1. Looking at the Consolidated Statements of Cash Flows (rather than the Summary Analysis), discuss the composition and stability of operating cash flows over the three years.
  2. Looking at both the Consolidated Statements of Cash Flows and your Summary Analysis of Cash Flows, identify the major cash flows in each year. Discuss what the firm did in managing its financing (its debt and its equity) over the three-year period.

NATIONAL ASSOCIATION OF CREDIT MANAGEMENT
Driving results

Chapter 5: Razzle-Dazzle Electronics case materials follow.

Cash Flow Example

ABC Corp.
Income Statement Year 2

Net Sales	$45,000
Cost of Goods Sold	$30,000
Gross Profit	$15,000
General and Admin. Exp.	$5,000
Depreciation	$2,000
EBIT (Operating Profit)	$8,000
Interest Expense	$4,000
EBT	$4,000
Taxes	$1,500
Net Income	$2,500
Cash Dividends	$1,000
Change in Retained Earnings	$1,500

ABC Corp.

Balance Sheets	End Year 1	End year 2
Cash	$1,200	$2,000
Accounts Receivable	$6,000	$4,500
Inventory	$8,000	$9,000
Total Current Assets	$15,200	$15,500
Gross Prop., Plant, and Eq.	$36,000	$32,000
Less: Accumulated Depreciation	($17,500)	($16,000)
Net Prop., Plant, and Eq.	$18,500	$16,000
Total Assets	$33,700	$31,500
Accounts Payable	$3,500	$3,000
Current Long-Term Debt	$1,500	$2,000
Total Current Liabilities	$5,000	$5,000
Long-Term Debt	$14,700	$14,000
Common Stock and Paid-In Capital	$2,000	$2,000
Retained Earnings	$12,000	$10,500
Common Equity	$14,000	$12,500
Total Liabilities and Equity	$33,700	$31,500

Razzle-Dazzle Electronics

Razzle-Dazzle Electronics is a small manufacturer of specialized electronic parts. Sales for last year were $6.613 million. The firm has been your customer for several years. During your recent visit to the customer, their management was enthusiastic about their substantial recent growth and profitability, with sales growing at a 15 percent yearly rate for the last two years and returns on equity in the 20 percent range. This growth, they said, had necessitated the expansion of assets, including the purchase of a substantial amount of new equipment, which was partially financed with new term loans. They pointed out that their quick and current ratios have not declined over the period. However, payments from the firm have become increasingly slow. (Their financial statements for the last three years and a partial analysis follow.)

1. Assume that the financial statements were prepared by a local accountant and that the statements include a letter from the accountant saying that these financial statements were prepared according to Generally Accepted Accounting Principles as the accountant understands them. Give examples of several of the questions you would initially ask the management of Razzle-Dazzle about these statements and the firm's financing.

2. Complete the ratio and cash flow analysis for Razzle-Dazzle.

3. Interpret these results starting with the ratio analysis and proceeding to the cash flow analysis; indicate what has happened to the firm's credit worthiness and why this has occurred. (Notes: (1) While the turnover ratios and days-based ratios for accounts receivable and inventory contain the same information, we are going to compute them both for practice. (2) Similarly, we are going to compute both the Total Debt/Total Assets (the "Debt Ratio") and Total Debt/Equity ratios. (3) This is a manufacturing firm so its cost of goods sold contains both purchases and other costs like factory labor, so days payable outstanding cannot be accurately computed from the information in these financial statements. To allow for this, compute the sum of the ACP and days inventory held rather than the cash conversion cycle.) Graph the following for the three years: (1) quick ratio, current ratio, and the 2013 industry average for each of these; (2) average collection period, days inventory held, and the 2013 industry averages for each of these; (2) total debt to total assets and the 2013 industry ratio for this.

4. Give examples of additional questions you might want to ask the management of Razzle-Dazzle given the results of the financial analysis.

Razzle-Dazzle Electronics
Financial Statements, last three fiscal years, rounded thousands
Reordered for Analysis Purposes: Newest Statement on Right

Year	2011	2012	2013
Income Statements			
Sales	$5,000	$5,750	$6,613
Cost of Goods Sold	$3,500	$4,025	$4,629
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Gross Margin on Sales	$1,500	$1,725	$1,984
Selling and Administrative Expenses	$1,210	$1,312	$1,497
Depreciation	$40	$125	$156
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Earnings Before Interest and Taxes	$250	$288	$331
Interest Expense	$47	$74	$106
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Earnings Before Taxes	$203	$214	$225
Taxes	$67	$70	$75
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Earnings After Taxes	$136	$144	$150
Dividends Paid	$109	$115	$120
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Changes in Retained Earnings	$27	$29	$30
Balance Sheets			
Cash	$136	$100	$35
Accounts Receivable	$234	$376	$545
Inventory	$650	$775	$949
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Total Current Assets	$1,020	$1,251	$1,529
Gross Equipment	$1,000	$1,250	$1,562
Accumulated Depreciation	$320	$445	$601
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Net Equipment	$680	$805	$961
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Total Assets	$1,700	$2,056	$2,490
Short-Term Bank Debt	$119	$130	$178
Trade Payables	$510	$617	$747
Current on Term Loans	$40	$53	$78
Accruals	$136	$165	$199
	-----	-----	-----
Total Current Liabilities	$805	$965	$1,202
Term Loans	$194	$361	$528
Equity	$701	$730	$760
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Total Liabilities and Equity	$1,700	$2,056	$2,490

Razzle-Dazzle Electronics: Ratios

Year	2010	2011	2013	Industry Average 2013
Liquidity				
Current Ratio	1.267			1.700
Quick Ratio	0.460			0.900
Cash Flow Liquidity Ratio		0.247		Not Avail.
Accounts Receivable:				
Accounts Receivable Turnover	21.37			7.80
Average Collection Period (days)	17.08			46.79
Inventory				
Inventory Turnover based on CGS	5.38			6.00
Days Inventory Held	67.79			60.83
Sum of ACP and Days Inv. Held	84.87			107.62
Debt Ratios				
Total Debt/Total Assets	58.76%			57.30%
Total Debt/Equity	1.43			1.34

Razzle-Dazzle Electronics: FASB 95 Cash Flow Analysis

Year	2011-12	2012-13
Cash Flow from Operations Calculations:		
Cash flow from income statement		
Earnings after Taxes	$144	
Depreciation Addback	$125	
Total	$269	
Changes in accounts receivable	($142)	
Changes in inventory	($125)	
Changes in Trade Payables	$107	
Changes in Accruals	$29	
Total Adjustments	($131)	
CFFO	$138	
Cash Flows from Investing		
Changes in Gross Equipment	($250)	
Cash Flows from Investing	($250)	
Cash Flows from Financing		
Change in Short-Term Bank Debt	$11	
Change in Current Long-Term Debt	$13	
Change in Term Loans	$167	
Dividends Paid	($115)	
Cash Flows from Financing	$76	
Change in Cash Balance	($36)	

Razzle-Dazzle Electronics: Summary Cash Flow Analysis

Year	2011-12		2012-13
Inflows			
CFFO	$138	42%	
Change in Short-Term Bank Debt	$11	3%	
Change in Current Long-Term Debt	$13	4%	
Change in Term Loans	$167	51%	
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Total Cash Inflows	$329	100%	
Outflows			
Changes in Gross Equipment	$250	68%	
Dividends Paid	$115	32%	
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Total Cash Outflows	$365	100%	
Change in Cash	$(36)		